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## India

**Post:** New Delhi

### Optimism Grows for a Replenishing Monsoon

**Report Categories:**

Agricultural Situation

Agriculture in the News

Agriculture in the Economy

Climate Change/Global Warming/Food Security

Market Development Reports

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**Report Highlights:**

A highly erratic southwest monsoon in 2015 followed by a relatively warm winter has affected agricultural production across India. The prospect of an above normal monsoon coupled with an adequate seed supply has raised expectations for a large 2016 Kharif and subsequent Rabi crop. Low reservoir levels and a recent, strong heatwave continue affecting the existing Rabi crop.

**General Information:****Monsoon 2016 – Above Normal Rainfall Expected**

On April 12, 2016, the Indian Meteorological Department (IMD) published its first long-range rainfall forecast for the upcoming 2016 southwestern monsoon (June to September). The second forecast is expected in June. As per the IMD forecast, the monsoon season rainfall is likely to be 106 percent of the long-period average. This is categorized as above normal rainfall for the country. For more details refer to the [IMD First Long Range Forecast Monsoon 2016](#)

**Heat Wave Affecting Parts of the Country**

The IMD's most recent public [weather report](#) continues featuring a heat and severe heat wave that is touching much of the country's agricultural belt. Per the report, maximum and minimum temperatures have been above normal and are [forecast](#) to remain above normal; especially above-average minimal temperatures, into mid-May.

**Monsoon 2015 – Lower than Average Rainfall for a Second Consecutive Year**

During the 2015 southwestern monsoon, the cumulative rainfall was 14 percent below normal. While the monsoon onset was on time, the rainfall received during the season was below average. The accumulated average rainfall was 760.6 mm while the normal average rainfall was 887.5 mm. In 2014, India experienced a deficient monsoon, as well. The states most affected by the below-average rainfall are Maharashtra, Telangana, Bihar, Uttar Pradesh, Uttarakhand, Himachal Pradesh, Punjab, Haryana, and parts of Karnataka, Gujarat, and Madhya Pradesh.

**Post 2015 Monsoon (Oct/Dec) and 2016 Winter (Jan/Feb) Season**

During the 2015/16 Rabi season (October – March), weather disturbances led to hailstorms, unseasonal rains, and high velocity winds and subsequent lodging for some crops in various parts of the country. The total area of 1,506,000 hectares was affected in varying magnitudes. This is slightly larger than the size of the State of Connecticut in the United States. Reports indicate that an area of 602,000 hectares planted under different crops was affected by this weather and the remaining 904,000 hectares was planted in wheat.

As per the Ministry of Agriculture, a total of 246 Districts in 10 States have been declared as drought affected during the 2015/16 season. The states of Karnataka (both for Kharif and Rabi), Chhattisgarh, Madhya Pradesh, Maharashtra, Odisha, Telangana, Uttar Pradesh, Andhra Pradesh, Jharkhand and Rajasthan have submitted memoranda seeking recognition as drought affected. Once recognized the states can seek and receive financial assistance from the National Disaster Relief Fund (NDRF). The governments of Rajasthan and Haryana reported crop losses due to hailstorms that occurred in February and March 2016 though no memoranda have reportedly been filed.

**Author Defined:**

## Tables and Weather Maps

**Summer Crops Sown Area (in million hectares)**

Crop	Area sown in 2015-16 as on February 5, 2016	Area sown in 2014-15 as on February 5, 2015
Summer Rice	0.591	0.809
Summer Pulses	0.000	0.000
Summer Oilseeds	0.125	0.165
<b>Total</b>	<b>0.716</b>	<b>0.974</b>

Source: Ministry of Agriculture, Government of India

**Rabi 2015 Sown Area (in million hectares)**

Crop	Area sown in 2015-16 as on January 28, 2016	Area sown in 2014-15 as on January 28, 2015	Normal Area (Average of last 5 seasons)
Wheat	29.252	30.594	29.574
Pulses	13.908	14.301	13.648
Coarse Cereals	6.008	5.676	6.043
Oilseeds	7.743	7.951	8.529
Rice	2.241	2.408	4.311
<b>Total</b>	<b>59.152</b>	<b>60.930</b>	<b>62.105</b>

Source: Ministry of Agriculture, Government of India

**Kharif 2015 Sown Area (in million hectares)**

Crop	Area sown in 2015-16	Area sown in 2014-15	Normal Area (Average of last 5 seasons)
Rice	37.824	37.967	38.834
Pulses	11.562	10.289	10.875
Coarse Cereals	18.607	18.187	20.441
Oilseeds	18.515	17.798	18.519
Sugarcane	4.884	4.874	4.818
Cotton	11.709	12.655	11.496
<b>Total</b>	<b>103.101</b>	<b>101.770</b>	<b>104.983</b>

Source: Ministry of Agriculture, Government of India

### Storage Status at 91 Major Reservoirs as on April 21, 2016

#### Region wise Live Storage of water as Percentage of Full Reservoir Level

Region	2016	2015	10 years Average
Northern Region	22	37	31
Eastern Region	32	43	34
Western Region	19	34	38
Central Region	29	39	26
Southern Region	14	23	24
All India	22	65	76

Source: Ministry of Water Resources, Government of India

According to the Government of India, states having better storage than last year for corresponding period are Andhra Pradesh and Tripura. For more details refer – [Press Release No. 139070](#).

**Sowing and Harvesting Operations normally in  
progress during the month of April**

Region	States	Sowing	Harvesting
Northern India	Punjab and Haryana	Tur (K), Potato, Sugarcane, Ginger, Chillies (Dry), Sweet Potato, Turmeric	Wheat, Barley, Small Millets (R), Gram, Tur (K), Other Rabi Pulses, Potato, Castor seed, Rapeseed and Mustard, Linseed, Onion.
	Rajasthan	Sugarcane.	Wheat, Barley, Urad (R), Mung (R), Other Rabi Pulses, , Tobacco, Castor seed, Rapeseed and Mustard, Linseed.
	Himachal Pradesh	Maize, Summer Potato (Hills), Sugarcane, Ginger Chillies (Dry), Sesamum, Cotton, Turmeric.	Wheat, Barley, Gram, Other Rabi Pulses, Rapeseed and Mustard, Linseed.
	Uttar Pradesh	Sugarcane, Chillies (Dry), Cotton, Jute, Mesta.	Summer Rice, Wheat, Barley, Gram, Tur (K), Tobacco, Castor seed, Rapeseed and Mustard, Linseed, Onion, Sugarcane.
	Jammu and Kashmir	Autumn Rice, Jowar (R), Maize, Ragi, Small Millets (K), Summer Potato, chillies (Dry), Tobacco, Sannhemp, Onion.	Wheat, Barley, Small Millets (R), Gram Sesamum, Linseed, Onion
	Delhi	Jowar (K), Sugarcane, Tobacco, Onion.	Wheat, Gram, Tur (K) Rapeseed and Mustard, Linseed.
Western India	Maharashtra	Sugarcane	Maize (R), Wheat Gram, Other Rabi Pulses, Cotton, Onion.
	Gujarat	Sugarcane	Castor seed, Onion
Southern India	Andhra Pradesh	Autumn Rice, Sugarcane.	Summer rice, Jowar (R), Ragi (R), Small Millets (R), Other Rabi Pulses, Sugarcane, Cotton
	Karnataka	Maize, Urad (K) Mung (K), Potato (Hills) Tobacco, Castor seed, Seasamum, Sweet Potato (Hills), Sannhemp, Onion (2nd Crop).	Summer Rice, Gram, Urad (R), Summer Potato, Cotton, Turmeric, Onion (1st Crop). Tapioca.

	Tamil Nadu	Summer Rice, Jowar (R), Summer Potato, Sugarcane, Pepper (Black), Chillies (Dry), Groundnut (Late), Sesamum, Cotton, Onion Sannhemp.	Winter Rice, Jowar (R), Tur (R), Mung (K), Winter Potato, (Hills), Sugarcane, Chillies, (Dry), Tobacco, Groundnut (Early), Cotton, Onion.
	Kerala	Autumn Rice, Ragi, Ginger, Turmeric, Tapioca.	Summer Rice, Tur (R), Other Rabi Pulses, Sesamum
Central India	Madhya Pradesh	Sugarcane, Onion	Wheat, Barley, Tur (K), Winter Potato (Plains), Castor seed, Linseed, Onion.
Northeast India	Assam	Autumn Rice, Maize, Small Millets (R), Tur (R), Sugarcane, Cotton, Mesta	Wheat, Tur (R), Sown during previous year.
	Manipur	Maize, Turmeric	Gram.
	Tripura	Autumn Rice, Maize, Sugarcane, Ginger, Chillies, (Dry), Sesamum, Cotton, Jute	Summer Rice, Chillies (Dry), Tobacco
East India	Orissa	Sugarcane, Chillies (Dry)	Wheat, Barley, Urad (R), Mung (R), Chillies (Dry).
	Bihar	Jowar (K), Bajra, Jute	Wheat, Barley, Gram, Tur (K), Castor seed, Linseed.
	West Bengal	Autumn Rice, Maize, Tur (K), Sugarcane, Ginger Chillies (Dry), Sesamum, Jute, Mesta	Summer Rice, Wheat, Barley, Gram, Tur (K), Urad (R), Other Rabi Pulses, Winter Potato (Plains), Chillies (Dry).

Source: Directorate of Economics and Statistics, Ministry of Agriculture, Government of India

**ALL INDIA POSITION OF CROPWISE REQUIREMENT AND AVAILABILITY OF  
CERTIFIED/QUALITY SEEDS FOR KHARIF 2016**

**QUANTITY IN QUINTALS**

<b>CROP</b>	<b>Requirement</b>	<b>Availability</b>	<b>Surplus/ Deficit</b>	<b>Remarks</b>
PADDY	6750849	7764603	1013703	
BAJRA	222437	248149	25712	
JOWAR	160931	163479	2548	
MAIZE	1011711	1045896	34185	
RAGI	27574	42535	14961	
LITTLE MILLET	590	590	0	
ITALIAN MILLET	1700	1920	220	
KODO	3110	1058	-2052	<b>Meet from Farm saved seeds</b>
BANYARD MILLET	760	641	-119	
AMARANTHUS	40	10	-30	
<b>CEREALS TOTAL</b>	<b>8179702</b>	<b>9268881</b>	<b>1089128</b>	
ARHAR	270163	295337	25174	
URD	158670	186652	27982	
MOONG	201495	233584	32089	
COWPEA	15566	18642	3076	
MOTH	20000	21122	1122	
HORSEGRAM	16945	25631	8686	
INDIAN BEAN	12870	13146	276	
RAJMA	2396	3550	1154	
GUAR	81000	94001	13001	
PEAS	12	0	-12	<b>Meet from Farm saved seeds</b>
RICE BEAN	1464	970	-494	
<b>PULSES TOTAL</b>	<b>780581</b>	<b>892635</b>	<b>112054</b>	
GROUNDNUT	1812882	1833220	20338	
SOYABEAN	2900154	2963275	63121	
SUNFLOWER	15267	16048	781	
SESAME	20490	31611	11121	
NIGER	1142	1093	-49	<b>Meet from Farm saved seeds</b>
CASTOR	58107	84061	25954	
<b>OILSEEDS TOTAL</b>	<b>4808043</b>	<b>4929308</b>	<b>121266</b>	
COTTON	214370	226772	12402	
DHAINCHA	7500	5000	-2500	<b>Meet from private</b>
JUTE	43274	38001	-5273	
SUNNHEMP	9250	8225	-1025	
POTATO	290	290	0	
<b>GRAND TOTAL</b>	<b>14043008</b>	<b>15369112</b>	<b>1326053</b>	



**STATE-WISE DETAILS OF DISTRICTS DECLARED DROUGHT AFFECTED  
DURING – 2015-16**

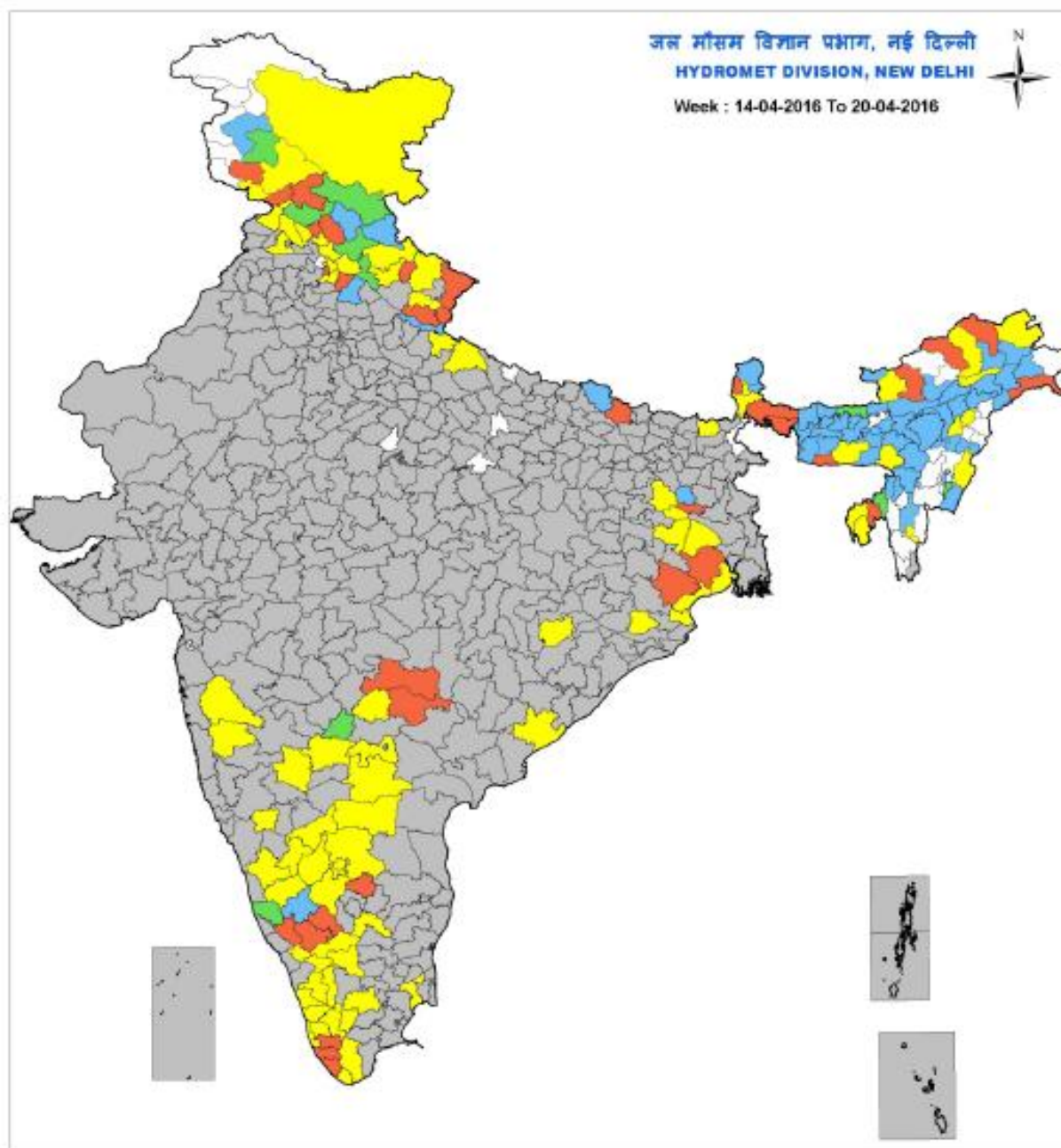
Sl. No.	Name of State/ total number of districts	Name of the affected districts	Total No. of districts affected
1.	Karnataka (30)	Bangalore Rural, Ramanagara, Kolar, Chickballapur, Tumakuru, Chitradurga, Davanagere, Chamarajanagar, Mysuru, Mandya, Ballari, Koppal, Raichur, Kalaburgi, Yadgir, Bidar, Belagavi, Bagalkote, Vijapura, Gadag, Haveri, Dharwad, Shivamogga, Hassan, Kodagu, Uttara Kannada, Chikkamagalur	27
		Ballari, Koppal, Raichuru, Kalaburagi, Yadagir, Bidar, Belagavi, Baglkote, Vijayapura, Gadag, Haveri, Dharwad.	12 (Rabi)
2.	Chhattisgarh (27)	Raipur, Gariaband, Mahasamund, Dhamtary, Durg, Balod, Bemetara, Rajnandgaon, Kabirdham, Bastar, Kondagaon, Narayanpur, Kanker, Dantewara, Sukma, Bijapur, Bilaspur, Mungeli, Janjgir-Chamap, Korba, Balrampur, Surajpur, Koria, Raigarh, Jashapur	25
3.	Madhya Pradesh (51)	Katni, Shahdol, Umania, Anuppur, Tikamgarh, Rewa, Jabalpur, Sidhi, Sagar, Damoh, Seoni, Sigroli, Sheopur, Chhatarpur, Bhind, Panna, Satna, Dindori, Shivpuri, Mandsaur, Morena, Jhabua, Bhopal, Ujjain, Neemuch, Vidishia, Raisen, Rajgarh, Khandwa, Raitam, Narsinghpur, Guna, Betul, Burhanpur, Agar Malwa, Sehore, Indore, Dhar, Shahapur, Harda, Chhindwara, Dewas, Ashoknagar, Khargone, Hoshangabad, Badwani	46
4.	Maharashtra (36)	Nashik, Dhule, Nandurbar, Jalgaon, Ahmednagar, Pune, Satara, Sangli, Aurangabad, Jalna, Beed, Latur, Osmanabad, Nanded, Parbhani, Hingoli, Buldhana, Akola, Yavatmal, Nagpur, Gadchiroli	21
5.	Odisha (30)	Angul, Balasore, Bargarh, Balangir, Boudh, Cuttack, Deogarh, Dhenkanal, Gajapati, Ganjam, Jajpur, Jharsuguda, Kalahandi, Kandhamal, Keonjhar, Khordha, Koraput, Mayurbhanj, Nuapada, Nabarangpur, Nayagarh, Puri, Rayagada, Sambalpur, Subamapur, Sundargarh, Bhadrak	27
6.	Andhra Pradesh (13)	Anantapur, Chittoor, YSR Kadapa, Kumool, Prakasam, SPSR Nellore, Guntur, Srikakulam, Vizianagaram, Krishna	10
7.	Uttar Pradesh (75)	Sant Ravidas Nagar, Sonbhadra, Sultanpur, Mirzapur, Ballia, Sidharthnagar, Shahjahanpur, Banda, Pratapgarh, Chandauli, Etawah, Basti, Baghpat, Jaunpur, Faizabad, Gonda, Kannauj, Barabanki, Sant Kabir Nagar, Jhansi, Jalaun, Gorakhpur, Hathras, Etah, Allahabad, Ghaziabad, Farrukhabad, Mau, Unnao, Rampur, Hamirpur, Lalitpur, Chitrakoot, Kanpur Nagar, Lucknow, Deoria, Mainpuri, Maharajganj, Agra, Auraiya, Pilibhit, Amethi, Mahoba, Rae Bareilly, Kushinagar, Kanpur Dehat, Kaushambi, Fatehpur, Ambedkar Nagar and Balrampur	50
8.	Telangana (10)	Mahabubnagar, Medak, Nizamabad, Ranga Reddy, Nalgonda, Karimnagar and Warangal	7
9.	Jharkhand (24)	Ranchi, Khunti, Lohardaga, Gumla, Simdega, West Singhbhum, Saraikela, East Singhbhum, Palamu, Garhwa, Latehar, Hazaribagh, Ramgarh, Koderma, Dhanbad, Bokaro, Chatra, Dumka, Godda, Deoghar, Jamtara, Giridih	22
10.	Rajasthan (33)	Ajmer, Banswara, Baran, Barmer, Bhilwara, Chittorgarh, Churu, Dungarpur, Hanumangarh, Jaipur, Jaisalmer, Jalor, Jhunjhunu, Jodhpur, Nagaur, Pali, Rajsamand, Udaipur, Pratapgarh	19





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INDIA METEOROLOGICAL DEPARTMENT

### DISTRICT RAINFALL MAP



#### Legend :

Excess [20% or more] Normal [-19% to 19%] Deficient [-59% to -20%] Scanty [-99% to -60%] No Rain [-100%] NO DATA

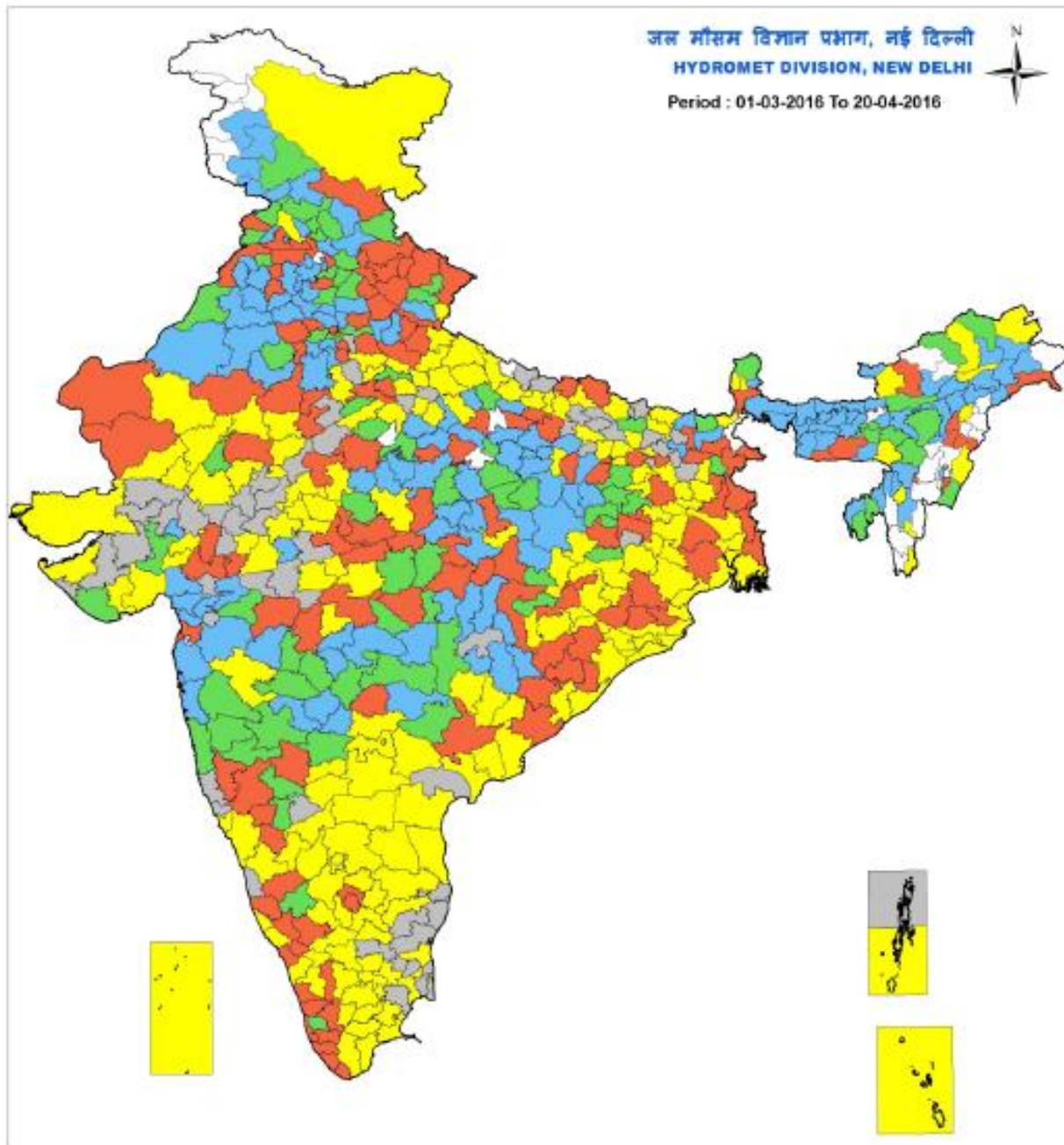
#### NOTES :

a) Rainfall figures are based on operation data.



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INDIA METEOROLOGICAL DEPARTMENT

**DISTRICT RAINFALL MAP**



**Legend :**

Excess [20% or more] Normal [-19% to 19%] Deficient [-59% to -20%] Scanty [-99% to -60%] No Rain [-100%] NO DATA

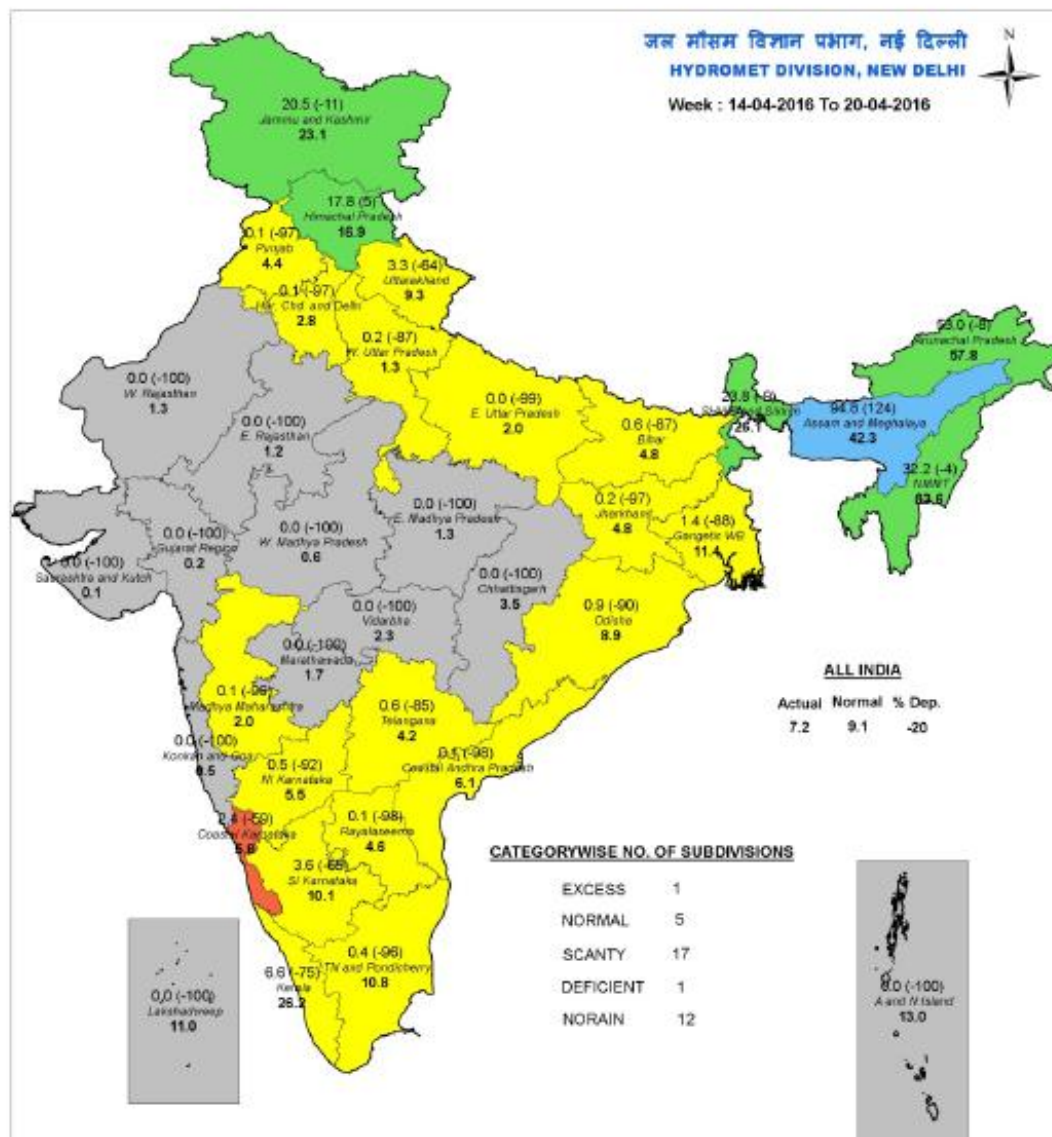
**NOTES :**

a) Rainfall figures are based on operation data.



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INDIA METEOROLOGICAL DEPARTMENT

### SUBDIVISION RAINFALL MAP



#### Legend :

Excess [20% or more] Normal [-19% to 19%] Deficient [-59% to -20%] Scanty [-99% to -80%] No Rain [-100%] NO DATA

#### NOTES :

- Rainfall figures are based on operation data.
- Small figures indicate actual rainfall (mm), while bold figures indicate Normal rainfall (mm).
- Percentage Departures of rainfall are shown in brackets.